

## **Areal Flood Warnings (FLW) and Associated Follow-up Products (FLS)**

**Example #1 - Areal Flood Warning (FLW).** Situation – at about 8:00 in the morning, a forecaster at WFO Wilmington, Ohio notes that over 3 inches of rain fell overnight on portions of Adams County in southern Ohio. Looking at the amount of rain that has already occurred, coupled with the strong possibility of an additional 1 to 2 inches, the forecaster determines that this is enough to cause widespread flooding throughout Adams County. There is one forecast point in this county, but the heavy rainfall is covering a wider area, so the forecaster decides to issue an areal flood warning for the entire county.

WGUS41 KILN 241202  
FLWILN

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE WILMINGTON OH  
802 AM EDT THU AUG 24 2000

OHC001-241800-  
/O.NEW.KILN.FL.W.0011.000824T1202Z-000825T0000Z/  
/O.ER.000000T0000Z.000000T0000Z.000000T0000Z.OO/  
ADAMS-  
INCLUDING THE CITIES OF WEST UNION...WRIGHTSVILLE...BLUE CREEK  
802 AM EDT THU AUG 24 2000

...FLOOD WARNING IN EFFECT UNTIL 800 PM THIS EVENING...

THE NATIONAL WEATHER SERVICE IN WILMINGTON HAS ISSUED A

\* FLOOD WARNING FOR SMALL STREAMS IN ADAMS COUNTY

\* UNTIL 800 PM THIS EVENING

\* AT 800 AM EDT...WEATHER SERVICE DOPPLER RADAR INDICATED THAT OVER  
3 INCHES OF RAIN HAD FALLEN OVER PARTS OF THE COUNTY. AN ADDITIONAL  
ONE OR TWO INCHES ARE POSSIBLE THROUGHOUT THE DAY. AS A RESULT...  
HIGH WATER LEVELS CAN BE EXPECTED INTO THE EVENING HOURS. SOME  
LOCATIONS IN THE WARNING AREA INCLUDE WEST UNION AND BLUE CREEK.

IF FLOODING IS OBSERVED...ACT QUICKLY. MOVE TO HIGHER GROUND. DO NOT  
STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING.

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## Areal Flood Warnings and Associated Follow-up Products (continued)

**Example #2 - Flood Statement: Follow-up to an Areal Warning: (FLS).** Situation – the previous flood warning issued for Adams County had a product expiration time six hours after issuance and an Event Ending Date/Time twelve hours after issuance. Heavy rain and flooding is continuing, so just before 200 PM, WFO Wilmington, OH issues a flood statement to continue the areal flood warning and provide updated flood information.

WGUS81 KILN 241755  
FLSILN

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE WILMINGTON OH  
155 PM EDT THU AUG 24 2000

OHC001-250000-  
/O.CON.KILN.FL.W.0011.000000T0000Z-000825T0000Z/  
/O.ER.000000T0000Z.000000T0000Z.000000T0000Z.OO/  
ADAMS-  
INCLUDING THE CITIES OF WEST UNION...WRIGHTSVILLE...BLUE CREEK  
155 PM EDT THU AUG 24 2000

...FLOOD WARNING REMAINS IN EFFECT UNTIL 800 PM THIS EVENING...

THE FLOOD WARNING CONTINUES FOR

\* SMALL STREAMS IN ADAMS COUNTY

\* UNTIL 800 PM EDT THIS EVENING

\* AT 150 PM EDT...WEATHER SERVICE DOPPLER RADAR INDICATED A SECOND AREA OF HEAVY RAINFALL APPROACHING THE COUNTY AND SURROUNDING AREAS. AN ADDITIONAL HALF INCH TO INCH OF RAIN IS POSSIBLE OVER PARTS OF ADAMS COUNTY...CAUSING SMALL STREAMS TO RISE AGAIN AFTER THIS MORNINGS FLOODS. FLOODING HAS BEEN REPORTED AT SEVERAL LOCATIONS ALONG WEST UNION AND BLUE CREEKS...BUT THE STREAMS ARE CRESTING AND FLOODING SHOULD BEGIN TO DECREASE IN THE NEXT FEW HOURS AFTER THE SECOND AREA OF HEAVY RAINFALL PASSES THROUGH.

IF FLOODING IS OBSERVED...ACT QUICKLY. MOVE TO HIGHER GROUND TO ESCAPE FLOOD WATERS. DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING. NEVER DRIVE CARS...TRUCKS OR SUVS THROUGH FLOODED AREAS. THE WATER MAY BE TOO DEEP TO ALLOW FOR SAFE PASSAGE.

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## **Areal Flood Warnings and Associated Follow-up Products (continued)**

**Example #3 - Flood Statement: Cancellation of an Areal Flood Warning (FLS).** Situation – in the previous flood statement continuing the flood warning for Adams County, the product expiration time was set to six hours after issuance – i.e., 0000Z or 8:00 pm. However, the flooding ended earlier than expected and the threat for more rain had ended, so at 2200Z (600 pm), WFO Wilmington, OH issues a flood statement to cancel the areal flood warning.

WGUS81 KILN 242200  
FLSILN

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE WILMINGTON OH  
600 PM EDT THU AUG 24 2000

OHC001-242215-  
/O.CAN.KILN.FL.W.0011.000000T0000Z-000825T0000Z/  
/O.ER.000000T0000Z.000000T0000Z.000000T0000Z.OO/  
ADAMS-  
INCLUDING THE CITIES OF WEST UNION...WRIGHTSVILLE...BLUE CREEK  
600 PM EDT THU AUG 24 2000

...FLOOD WARNING IS CANCELLED...

THE FLOOD WARNING IS CANCELLED FOR SMALL STREAMS IN ADAMS COUNTY.  
AT 600 PM EDT...WEATHER SERVICE DOPPLER RADAR INDICATED THE SECOND  
AREA OF HEAVY RAINFALL HAS MOVED OUT OF THE COUNTY AND SURROUNDING  
AREAS. SMALL STREAMS HAVE DROPPED FROM FLOOD LEVELS...BUT HIGHER THAN  
NORMAL FLOWS MAY CONTINUE THROUGH EARLY THIS EVENING.

NEVER DRIVE CARS...TRUCKS OR SUVS THROUGH FLOODED AREAS. THE WATER  
MAY BE TOO DEEP TO ALLOW FOR SAFE PASSAGE.

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### **Notes and Explanations:**

(1) Even though the flood warning is being cancelled at 2200Z (6 pm) on August 24, the Event Ending Date/Time remains 0000Z on August 25, per VTEC rules (NWSI 10-1703, section 2.2.2).

## Areal Flood Warnings and Associated Follow-up Products (continued)

**Example #4 – Areal Flood Warning for a River Reach (FLW).** Situation – Releases from Albeni Falls Dam have kept flows along the Pend Oreille River close to flood level for several days. During the morning on June 5, a forecaster at WFO Spokane, OR receives information indicating that several factors are coming together to push the river above flood level along an extended reach. At 11:00 am, the forecaster decides to issue an areal flood warning covering an entire reach of the Pend Oreille River in Pend Oreille County from Albeni Falls Dam downstream (northward) to the Canadian border.

WGUS46 KOTX 051800  
FLWOTX

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE SPOKANE WA  
1100 AM PDT WED JUN 5 2002

WAC051-060600-  
/O.NEW.KOTX.FL.W.0003.020605T1800Z-020607T0600Z/  
/O.RS.000000T0000Z.000000T0000Z.000000T0000Z.OO/  
PEND OREILLE-  
INCLUDING THE CITIES OF...NEWPORT...IONE...METALINE...METALINE FALLS  
1100 AM PDT WED JUN 5 2002

...FLOOD WARNING IN EFFECT UNTIL 1100 PM PDT THURSDAY EVENING...

THE NATIONAL WEATHER SERVICE IN SPOKANE HAS ISSUED A

- \* FLOOD WARNING FOR THE PEND OREILLE RIVER IN PEND OREILLE COUNTY
- \* UNTIL 1100 PM PDT THURSDAY EVENING
- \* ON THE PEND OREILLE RIVER BELOW ALBENI FALLS DAM...RELEASES FROM ALBENI FALLS DAM HAVE INCREASED TO 98000 CFS AT 1000 AM WEDNESDAY. THE FLOOD FLOW IS 100000 CFS. THE OUTFLOW FROM ALBENI FALLS DAM WILL DECREASE SLIGHTLY THIS EVENING TO 92000 CFS.
- \* THOUGH THE RIVER IS CURRENTLY BELOW FLOOD FLOW IMMEDIATELY BELOW THE DAM...MINOR FLOODING WILL OCCUR ALONG THE RIVER FURTHER DOWNSTREAM FROM NEWPORT TO THE CANADIAN BORDER DUE TO INFLOW FROM TRIBUTARIES AND LOCAL RAINFALL. SEVERAL STRUCTURES WILL BE FLOODED IN NEWPORT. THE RAINFALL EXPECTED TODAY WILL ADD TO THE EXISTING HIGH FLOW.

BOATERS AND PERSONS WITH INTERESTS ALONG THE PEND OREILLE RIVER ARE URGED TO USE EXTREME CAUTION WHEN NEAR OR ON THE RIVER. STAY TUNED TO FURTHER DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO OR YOUR LOCAL TV OR RADIO STATIONS.

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## Areal Flood Warnings and Associated Follow-up Products (continued)

### **Example #5 – Flood Statement: Extension In Time for an Areal Flood Warning (FLS).**

Situation – At 11:00 p.m. on Thursday evening, the forecaster realizes that the river did not recede as much as originally expected and decides to extend the areal flood warning for the Pend Oreille River in Pend Oreille County by 24 hours.

WGUS86 KOTX 070600  
FLSOTX

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE SPOKANE WA  
1100 PM PDT THU JUN 6 2002

WAC051-071800-  
/O.EXT.KOTX.FL.W.0003.000000T0000Z-020608T0600Z/  
/O.RS.000000T0000Z.000000T0000Z.000000T0000Z.OO/  
PEND OREILLE-  
INCLUDING THE CITIES OF...NEWPORT...IONE...METALINE...METALINE FALLS  
1100 PM PDT THU JUN 6 2002

...FLOOD WARNING EXTENDED UNTIL 1100 PM PDT FRIDAY EVENING...

THE NATIONAL WEATHER SERVICE IN SPOKANE HAS EXTENDED THE

\* FLOOD WARNING FOR THE PEND OREILLE RIVER IN PEND OREILLE COUNTY

\* UNTIL 1100 PM PDT FRIDAY EVENING

\* ON THE PEND OREILLE RIVER BELOW ALBENI FALLS DAM...THE MOST  
RECENTLY REPORTED DAM RELEASE WAS 92800 CFS AT 1000 PM THURSDAY.  
TRIBUTARIES AND LOCAL RAINFALL HAVE ADDED TO THE DAM OUTFLOW TO  
RAISE THE RIVER ABOVE FLOOD FLOW OF 100000 CFS. THE OUTFLOW FROM  
ALBENI FALLS DAM IS FORECAST TO GRADUALLY DECREASE TO 92000 CFS  
BY SATURDAY MORNING AND THE RAINFALL IS EXPECTED TO END EARLY  
FRIDAY MORNING...SO MINOR FLOODING WILL CONTINUE UNTIL FRIDAY  
EVENING.

\* MINOR FLOODING CONTINUES ALONG THE RIVER DOWNSTREAM FROM NEWPORT TO  
THE CANADIAN BORDER. SEVERAL STRUCTURES ARE FLOODED AND SOME SAND  
BAGGING OPERATIONS ARE CONTINUING. ANY ADDITIONAL RAINFALL WOULD  
ADD TO THE EXISTING HIGH FLOW.

BOATERS AND PERSONS WITH INTERESTS ALONG THE PEND OREILLE RIVER ARE  
URGED TO USE EXTREME CAUTION WHEN NEAR OR ON THE RIVER. STAY TUNED  
TO FURTHER DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO OR YOUR  
LOCAL TV OR RADIO STATIONS.

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